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SEA ICE STUDIES IN THE SPITSBERGEN - GREENLAND AREA

Investigation No 28 540

4th Quarterly Progress Report

from

Torgny E. Vinje  
Norwegian Polar Institute  
Postbox 158  
1330 Oslo Lufthavn  
Norway

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#### 4th Quarterly Progress Report

Since last QPR, May 1976, 29 scenes have been received from the test area. Nine of these scenes are from 23, ten from 25, two from 26 and eight from 29 April. The negatives were received one week ago and the analyzing has not started for full yet. The dense coverage over the short period seems, however, very promising for progress within present objectives.

Ground-truth data were collected during April by myself, and later on during July and August my Landsat assistant will be in the northernmost part of the test area.

Of special interest is correspondence between a flight on 25 April to the easternmost island Kvitøya and the obtained Landsat scene 2454-11514 of the same day. This scene was registered one hour previous to our landing with a small aircraft on the ice, and we have therefore very interesting ground truth data for interpretation of an imagery which nearly is free for clouds.

The ground-truth data which will be used for Landsat-interpretation are:

##### Signatures of

- a) multiyear ice
- b) one year old ice
- c) salt water soaked fast ice
- d) long stripes of drift snow formed in areas with open water
- e) sea ice concentrations
- f) shadow of transparent cirrus clouds
- g) partly snow covered landscape

Five Nimbus+RAMS automatic stations were during April-May placed on ice floes and drift speed values obtained in two different ways can therefore be compared.

The scene 2459-11514 has given additive information as to the contour of Kvitøya which according to previous Landsat imageries has an <sup>acc</sup> ~~average~~ which is 260% greater than what was previous believed.

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